

## **AMENDMENTS TO THE SPECIFICATION**

**Please amend paragraph [0001] as follows:**

[0001] The present invention relates to a waste water disposal by the biosolid method or, more particularly, to a waste water treatment process in the biosolid method in which a reaction vessel is fed with a gas-dispersion liquid having a reactive gas containing oxygen or oxygen and ozone in a dissolved form liquid or in the dissolved form and a fine bubble form ~~of ultrafine bubbles~~ to be dispersed, kept staying ~~standing~~ or stored.

**Please amend paragraph [0018] as follows:**

[0018] In order to solve the above-described problems, the line atomizing waste water treatment method of the present invention is characterized in that, ~~oxygen or a reactive gas containing oxygen and ozone is dispersed as ultrafine bubbles into a returned biosolid water or clean water to give a gas dispersion liquid outside the vessels (pools) within the waste water treatment system and the aforementioned gas dispersion liquid is introduced into the reaction vessel so as to supply oxygen to the microorganisms. Alternatively, the aforementioned gas dispersion liquid is introduced into the step preceding the reaction vessel or into the step succeeding the reaction vessel.~~ in a waste water treatment process by the biosolid method, an aqueous medium consisting of a returned biosolid water or clean water is admixed with 50 volume % or less of a reactive gas consisting of oxygen or a mixed gas of oxygen and ozone and pressure-transferred by pumping to a line atomizer under about 0.0981 MPa to about 5.394 MPa (1 to 55 kg/cm<sup>2</sup>) so as to cause, as a result of the interaction of cavitation/ultrasonic waves of 20 to 12000 kHz, in the atomizer, an O/OH radical molecules/atoms reaction is caused by the interaction/impact of an ultrahigh temperature/high pressure (several thousand degrees and several thousands atmospheres, and dissolving of the reactive gas to the limit, where, when a remainder of the reactive gas is found, the remaining activated gas is dispersed and mixed in a bubble diameter of 1 nm to 30000 nm to form a dissolution/dispersion liquid of the activated gas while the aforementioned dissolution/dispersion liquid of the activated

gas is introduced into the sewage under treatment.

**Please amend paragraph [0019] as follows:**

[0019] ~~The concentration of biosolid in the aforementioned returned biosolid water can be 2 to 200000 mg/liter. It is preferable that: the BOD loading of the aforementioned waste water under treatment can be in the range from 50 to 200000 mg/liter, the ozone concentration of the aforementioned activated gas can be 0.01 to 0.04 mg/liter, the time for limit dissolution of the aforementioned reactive gas in the atomizer can be 0.5 second or shorter, and, in accordance with the proceeding conditions of waste water treatment, the kind of the reactive gas, concentration, volume, the vessel or pool for returning and the duration for introduction as set are managed unitarily.~~

**Please delete paragraphs [0020] through [0023].**

**Please amend paragraph [0028] as follows:**

[0028] In the waste water treatment process according to the biosolid method, the present invention has accomplished to transfer under pressure of a gas-liquid with a high gas/liquid ratio of a desired liquid and a reactive gas of oxygen as a hardly dissolvable gas or oxygen and ozone into ~~a line~~ an atomizer having a function for rendering the gas-liquid into ultrafine bubbles or forming a mixture and having a function to generate cavitation and ultrasonic waves under a high pressure and by the aforementioned ~~line~~ atomizer treatment, the reactive gas is caused to be dissolved in the aforementioned gas-liquid to give a gas-dispersion liquid, when the activated gas still remains, while the same is introduced into a reaction vessel where the biochemical reaction is promoted by sufficient aeration (supply of dissolved oxygen) or, alternatively, in the course of formation of the gas-dispersion liquid in the aforementioned line atomizer, the ozone-oxidation decomposition reaction is effected instantaneously and the same is introduced into vessels/pools other than the reaction vessel so that these vessels/pools are imparted with a

function of biological treatment to make composite of the functions of the vessels/pools along with 1) the step of oxygen aeration dissolution/staying/storage, 2) the step of ozone oxidative decomposition and 3) the step of biosolid returning unitarized in the biosolid-returning line so as to enable control and management to accomplish decreasing or disappearance of excessive biosolid and enabling disposal of even high-loaded waste water and further to accomplish space saving, energy saving and manpower saving.

**Please amend paragraph [0033] as follows:**

[0033] By means of a line atomizing treatment, in the present invention, a desired volume of the reactive gas is instantaneously ~~converted into ultrafine bubbles to cause rapid dissolution of a part thereof~~ and rapidly dissolved, the remainder being dispersed/staying/stored in the liquid in the form of ultrafine bubbles so that the liquid holding the thus dispersed/staying/stored reactive gas can be returned/introduced satisfactorily to the aeration treatment process in a dissolved state or in the form of ultrafine bubbles suitable for utilization.

**Please amend paragraph [0058] as follows:**

[0058] The line atomizer is a set of apparatuses consisting of a gas-liquid pressure-transfer pump capable of pressure-transferring a gas-liquid (gas-containing liquid) in a gas-liquid ratio not exceeding 50% by volume under a pressure of about ~~0.981~~ 0.0981 to 5.394 MPa (1 to 55 kg/cm<sup>2</sup>) and an atomizer capable of exhibiting a function of subjecting the aforementioned gas-liquid to vortex flow/mixing under a high pressure (about ~~0.981~~ 0.0981 to 5.394 MPa (1 to 55 kg/cm<sup>2</sup>) to generate cavitations and ultrasonic waves of 20 to 12000 kHz either singly or simultaneously thereby converting the aforementioned gas-liquid into ultrafine bubbles of 1 nm to 30000 nm bubble diameter and further to form O radicals and OH radicals while a line atomizer system implies a system in a series consisting of the aforementioned line atomizer and an oxygen and/or ozone feed unit or preferably an oxygen/ozone cycle generator and capable of effecting unitary running

control depending on the conditions of waste water treatment.

**Please amend paragraph [0079] as follows:**

[0079] It is well known that the factor of pressure is important for dissolving/dissolution of a gas and a higher pressure is more advantageous. By taking these facts into general consideration, the pressure range in the present invention is selected in the range of about ~~0.1~~ 0.0981 MPa to about 5.394 MPa (1 to 55 kg/cm<sup>2</sup>).